

2/2 014 UNCLASSIFIED PROCESSING DATE--2004070
 CIRC ACCESSION NO--AP0135009
 ABSTRACT/EXTRACT--(U) GP-3- ABSTRACT. THE REACTIONS OF RC TRIPLE BOND
 COME SUB2 CME (R IS ME, LT, PR, BU) WITH R PRIME1 MOBR (R PRIME1 IS ME
 OR ET) PROCEED BY A FREE RADICAL MECHANISM (G. M. MARYAN, ET AL., 1966,
 1967, 1968). THE RADICALS RC TRIPLE BOND COME SUB2 (I) AND R PRIME1.
 INTERACT GIVING R PRIME1 R PRIME1, RC TRIPLE BOND COME SUB2 R PRIME1,
 AND RC TRIPLE BOND COME SUB2 CME SUB2 C TRIPLE BOND OR. I REARRANGES TO
 RC::C: CME SUB2 WHICH THEN DIMERIZES GIVING RC SUB2 C::C:OROR::C: CME SUB2
 (II) AND RC TRIPLE BOND COME SUB2 OR::C: CME SUB2 OR I REACTS WITH R
 PRIME1, GIVING RR PRIME1 C::C: CME SUB2 (III). II AND III WERE DETECTED
 BY GAS CHROMATOGRAPHY. ONLY. FACILITY: VSES. NALCH.-ISSLEU. PROBT.
 INST. PCIM. PROD., USSR.

1/2 016 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF AMINO ALCOHOLS AND AMINES ON THE KINETICS OF VINYL
ACETATE PHOTOPOLYMERIZATION. II. INFLUENCE OF DIETHYLAMINE ETHANOL IN THE
AUTHOR--(03)-CHALTYKYAN, D.A., MELKONYAN, R.G., BELLERYAN, N.M.

COUNTRY OF INFO--USSR

SOURCE--ARM. KHIM. ZH. 1970, 23(2), 119-23

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--AMINO ALCOHOL, AMINE, PHOTOPOLYMERIZATION, POLYVINYL ACETATE,
ETHANOL, METHANOL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1772

STEP NO--08/0426/70/025/002/0119/0123

CIRC ACCESSION NO--AP0123569

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0123569

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHOTOPOLYMN. RATE (W) OF H
SUB2 C:CHDAC (I) INCREASES WITH THE CONCN. OF THE ADDED ET SUB2 NCH SUB2
CH SUB2 OH (II) IN A NON LINEAR FASHION. WHEN MEQH IS ALSO ADDED TO I,
W CHANGES LINEARLY WITH II CONCN. II, BESIDES INCREASING W, ACTS AS THE
CHAIN TRANSFER AGENT. THE CHAIN TRANSFER CONST. (KAPPA) DEPENDENCE ON
THE TEMP. IS EXPRESSED BY $KAPPA = A \exp(-15200/RT)$, WHERE A IS
7.8 TIMES 10 PRIME WHEN BOTH II AND MEQH ARE PRESENT; A IS 5.3 TIMES
10 PRIME NEGATIVE WHEN ONLY II IS PRESENT. FACILITY: EREVAN.
GOS. UNIV., EREVAN, USSR.

UNCLASSIFIED

USSR

UDC 669.713.7.01

REVAZYAN, A. A., MELKONYAN, V. A., AGASIYEV, L. I., and YOSKANYAN, O. M.

"Anode Diffusion in Aluminum Electrolysis"

Moscow, Tsvetnyye Metally, No 10, Oct 70, pp 38-40

Abstract: The existence of diffused hydrogen in aluminum is discussed on the basis of available data. An experiment on the electrolysis of a cryolite aluminum oxide melt in a sintered corundum cell, conducted with the purpose of establishing whether the hydrogen comes from water electrolysis, is described. The possibility of hydrogen anode diffusion and its cathode emanation was verified by laboratory tests in the sintered corundum cell. The absence of a cathode aluminum formation process was demonstrated by conducting the electrolysis with a hydrogen-saturated anode.

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1/2 024 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--FOOD PROCURING CONDITIONED REFLEXES OF RABBITS AFTER INJECTION OF
RIBONUCLEASE INTO DIFFERENT REGIONS OF THE HIPPOCAMPAL DORSAL AREA -U-
AUTHOR--(02)-TUSHMALOVA, N.A., MELKOVA, I.V. M
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL VYSSHEY NERVNOY DEYATEL'NOSTI, 1970, VOL 20, NR 3, PP
519-523
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RIBONUCLEASE, BRAIN, CONDITIONED REFLEX, FOOD
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1998/0383 STEP NO--UR/0247/70/020/003/0519/0523
CIRC ACCESSION NO--AP0121070
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE---23OCT70

2/2 024

CIRC ACCESSION NO--AP0121070

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE EXPERIMENT WAS AIMED AT STUDYING THE INFLUENCE OF RIBONUCLEASE (300 GAMMA) INJECTED INTO THE BRAIN THROUGH CHRONICALLY IMPLANTED CANULAE ON THE FOOD PROCURING CONDITIONED REFLEXES OF RABBITS. THE NATURE OF THE INFLUENCE DEPENDS ON THE LOCATION OF THE CANULAE IN THE HIPPOCAMPUS. THE INJECTION OF RIBONUCLEASE INTO THE UPPER PARTS OF THE PYRAMIDAL LAYER OF THE DORSAL HIPPOCAMPUS RESULTS IN 100PERCENT OF CASES IN A COMPLETE INHIBITION OF CONDITIONED REFLEXES; THE INJECTION OF THE ENZYME INTO THE LOWER PARTS OF THE SAME HIPPOCAMPAL REGION JUST LEADS TO INCREASED LATENCIES OF CONDITIONED REACTION, WHILE INJECTION INTO THE FASCIA DENTATA AREA DOES NOT APPRECIABLY AFFECT THE RABBIT'S CONDITIONED ACTIVITY.
FACILITY: CHAIR OF PHYSIOLOGY OF HIGH NERVOUS ACTIVITY, LOMONOSOV UNIVERSITY, MOSCOW.

UNCLASSIFIED

USSR

UDC 669.14.018.821

MEL'KUMOV, I. N., KLYUYEV, M. M., PRYANISHNIKOV, I. S., PIVOVAROVA, L. I.,
and SHCHEGLOVA, R. I., Elektrostal' Plant

"Properties of Steels Alloyed with an Excess of Nitrogen"

Moscow, Stal', No 8, Aug 73, pp 749-752

Abstract: The properties of some standard steels were investigated in which nitrogen was added in amounts which exceeded the theoretical limits of its solubility under ordinary conditions. The specific steels studied were: EP222 (Kh21G7AN5), EP618 (Kh25N12AR), EP731 (OCOKh19G10N7AN2), E1835 (Kh25N16G7AR), and EP310 (1Kh15N5AN2). The chemical composition of these steels is given. It was shown that in the process of plasma-arc remelting from the gas phase a greater saturation of the metal with nitrogen is achieved than under conditions of using nitrided ferroalloys. Steel from ingots weighing 400 kg had satisfactory properties, especially increased strength with acceptable ductility. The quantitative effect of nitrogen was investigated and its mechanism refined. Four figures, two tables.

1/1

- 39 -

Transformation and Structure

USSR

UDC 669.14.018.8:621.191.4

FAYVILEVICH, G. A., MEL'KUNOV, I. N., and VINOGRAD, M. I., TsNTIChERMET
/Central Scientific Research Institute of Ferrous Metallurgy/, Elektrostal'
(Electric Steel) Plant

"Structural Transformations in 1Kh15N5AM2 Steel During Heating and Cooling"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 1, 1971, pp
36-38

Abstract: The authors studied the structure of 1Kh15N5AM2 (EP310) steel in a high-temperature microscope during heating to 1300° C and cooling to room temperature. Steel containing 0.14% C, 14.6% Cr, 4.5% Ni, 2.0% Mo, 0.03% N, smelted in an open electric arc furnace and after electroslag refining, was used for the study. The microstructure was studied by the methods of standard light and color metallography. It was found that delta ferrite is formed during high-temperature heating of the steel, beginning at 1200° C for electric-arc smelted metal and at 1250° C for electroslag-refined metal. The delta phase develops in the form of round grains in the open electric-arc smelted steel, in the form of prisms or plates in the electroslag-refined

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USSR

FAYVILEVICH, G. A., et al., Metallovedeniye i Termicheskaya Obrabotka Metallov, No 1, 1971, pp 36-38

metal. The difference in the character of delta ferrite formation during high-temperature heating is due to the fact that during the heating of open-smelting metal there is a more uniform process of delta ferrite formation as a result of the presence of delta ferrite nuclei in liquation sectors enriched with ferrite-forming elements, while in the electroslog-refined metal, owing to its great homogeneity, the delta ferrite appears along crystallographic planes of the austenite. The transformation of austenite to martensite in specimens cooled to room temperature after heating to 1300° C takes place in the same temperature range regardless of the smelting method, although the electroslog metal contains somewhat more martensite. This apparently is due to the large volume of metal with a uniform concentration of alloying elements, corresponding to axes of dendrites after electroslog refining.

S. S. KOL'BE and YU. I. SMIRNOV took part in the work, and the color etching was done by N. I. BUTNEVA.

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Steels

UDC: 669.14.018.8

USSR

M
MEL'KUMOV, I.N., VINOGRAD, M.I., and KLYUYEV, M.M."Improving the Quality of High-Strength 1Kh15N5AM2 Stainless Steel"

Moscow, Stal', No 5, May 70, pp 460-463

Abstract: Studies were made of the effect of electroslag remelting on the macrostructure, contamination by nonmetallic inclusions, and mechanical properties of 1Kh15N5AM2 (also called brand EP310 or VNS-5) high-strength stainless steel of the intermediate austenite-martensite class. The steel has the following chemical composition (%): 0.11-0.16 C, ≤ 0.7 Si, ≤ 1.0 Mn, ≤ 0.020 S, ≤ 0.035 P, 14.0-15.5 Cr, 4.0-5.0 Ni, 2.3-2.8 Mo, and 0.05-0.10 N. Inclusions dropped threefold as the result of electroslag remelting. The denser and more uniform macrostructure and the absence of coarse clusters of nonmetallic inclusions prevent the formation of internal defects in forged pieces made of metal from electroslag remelting. The remelted metal is distinguished by uniformity and stability of mechanical properties along the entire section of the ingot, and has higher plasticity and ductility properties and considerably less anisotropy of mechanical properties at testing temperatures up to 500°C in comparison with metal obtained by open melting. The macrostructure and nonmetallic inclusions were investigated on cast and deformed specimens and the mechanical properties -- on deformed metal.

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USSR

MEL'KUMOV, I.N., et al, Stal', No 5, May 70, pp 460-463

The nonmetallic inclusions were determined according to the scale in the All-Union State Standard 1778-62, and the quantitative composition of the inclusions was determined by an electrochemical dissolution method using an acid electrolyte (HCl + KCl).

UDC 632.954:634.8

USSR

MEL'KUMOVA, Z. Sh., Turkmenian Agricultural Institute

"The Use of Herbicides on Vineyards"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 11, No 8 (118), 1973, pp 56-58

Abstract: The herbicides atrazin (in doses of 4 and 6 kg/hectare), symazin at 6 kg/hectare, monuron at 4 kg/hectare and a mixture of dalapon with symazin (15 + 6 kg/hectare) were found to be effective against annual and perennial weeds on the vineyards. With rational application these herbicides did not show a detrimental effect on the growth and development of the fruit. On the average, after a 2 year observation, the highest increase of the grape crop was achieved using the concentrations of the above mentioned herbicides.

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- 33 -

USSR

MELIYEV, A., MAKSUMOV, S. S., and ALIMBAYEV, E., Uzbek Scientific Research
Institute of Epidemiology, Microbiology, and Infectious Diseases

"Clinical and Epidemiological Characteristics of Hemorrhagic Fever in
Uzbekistan"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, Jan 73, pp 35-38

Abstract: Hemorrhagic fever currently continues to be recorded in Uzbekistan every year, causing tens of lethalties. In 1950-69 approximately 400 foci of this disease were found in nine oblasts of the Uzbek SSR. As a rule, infections occur in rural regions among persons whose work brings them close to natural foci of the disease or who come into contact with tick-infested cattle. In 60% of cases of the disease, attachment of ticks preceded the infection, while in 37% of cases of patients infected in the course of agricultural work, attachment of ticks was not observed. The incidence is highest in Jan-Aug, while sporadic infections occur throughout the year. The seasonal curve of the incidence coincides with that of the prevalence of the ticks *Hyalomma anatolicum* and *Hyalomma plumbeum turanicum* which harbor and transmit the virus. Cattle are infested throughout the year with ticks that transmit the disease. Among the cases studied, 64% were acute, 30% of medium intensity, and 6% light. On the 3rd-4th day of the disease, hemorrhagic phenomena developed in 90% of the patients

1/3

USSR

MELIYEV, A., et al., Meditsinskiy Zhurnal Uzbekistana, No 1, Jan 73, pp 35-38

against a background of pronounced toxicosis. A hemorrhagic rash was observed in 90% of cases and hemorrhages in the mucosa occurred in 58% of cases. Nosebleeds, gastric hemorrhages, intestinal hemorrhages, uterine hemorrhages, bleeding of the gums, and bleeding from the ears occurred in 89, 41, 68, 53, 68, and 3% of cases, respectively. In more than 50% of cases the hemorrhages were profuse, particularly those from the gastro-intestinal tract. Some patients developed a meningeal syndrome, presumably because of cerebral hemorrhages. In the majority of cases, hypochromic anemia was observed in the peripheral blood. Thrombocytopenia occurred in 20% of cases. On the other hand, the coagulability of the blood, the duration of blood flow, and the prothrombin level remained unchanged. Recovery took place within 2-4 weeks. Death occurred on the 5th-9th day of the disease in connection with repeated internal hemorrhages that were in some cases accompanied by pneumonia. Most cases of death were in Jun-Jul. The high lethality from hemorrhagic fever in Uzbekistan is due to positive diagnosis of the disease in severe forms only and also to the fact that patients are transported over distances of 20-50 km in the acute hemorrhagic stage. A specific characteristic of the disease in Uzbekistan is its contagiousness; 3% of the patients became infected as a result of contact with other persons who have the disease. In instances of contagion,

2/3

USSR

MELIYEV, A., et al., Meditsinskiy Zhurnal Uzbekistana, No 1, Jan 73, pp 35-38

the disease was usually accompanied by a pronounced hemorrhagic syndrome and had a lethal outcome in the majority of cases. The virulence of the causative factor was apparently increased in cases of transmission from one person to another. The mechanism of infection in such cases also presumably contributed to the increased severity of the disease.

3/3

UDC 621.372.853.1

USSR

MELKOV, G. A.

"Forced Oscillations of Open Dielectric Microwave Resonators"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 10, 1972, pp 2027-2034

Abstract: A study is made of the method of calculating the forced oscillations of an open dielectric resonator permitting finite results to be obtained under the following approximations: 1) the linear dimensions of the open dielectric resonator are appreciably less than λ_0 [the electromagnetic wave length in free space]; that is, $\epsilon \gg 1$, which is analogous to the assumption made for approximate calculations of the natural oscillations of open dielectric resonators; 2) the metal walls of the wave guide have no significant effect on the properties of the open dielectric resonator which is justified by the fact that the microwave fields outside the resonator are exponentially decreasing functions; 3) the problem of excitation of the cavity resonator is replaced by the problem of excitation of the oscillatory circuit equivalent to it [B. Z. Katsenelenbaum, *Vysokochastotnaya elektrodinamika*, Nauka Press, 1966]. The basic expressions are obtained for forced oscillations of a rectangular open dielectric resonator in a rectangular wave guide. The excitation of the lowest type of oscillations of the resonator by the lowest type of wave of the wave guide

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USSR

MELKOV, G. A., Radiotekhnika i Elektronika, Vol 17, No 10, 1972, pp 2027-2034

is investigated. An experiment performed to confirm the theoretical results is described in which a rectangular rutile resonator $3.1 \times 3.1 \times 2.5$ mm was used with a natural frequency of 8,950 megahertz.

2/2

- 55 -

UDC 669.14'786:541.123.28

USSR

IVANOV, B. S., KONDRAT'YEV, A. I., TOMILIN, I. A., LEVIN, F. L., and
MEL'KUMOV, I. N., Moscow

"Causes of Formation of Gas Blowholes in Nitrogen-Containing Steel Ingots"

Moscow, Akademiya Nauk SSSR. Izvestiya. Metally, No 6, Nov-Dec 72,
pp 108-113

Abstract: A study was made of the effect of weight and ingot quenching conditions on the quality of the macrostructure, solubility of nitrogen in solid and molten steels near the point of crystallization, and structural state of the metal at high temperatures. The mass of the ingot and the quenching regime exerted a weak effect on the reduction in the development of gas porosity in nitrogen-containing steel ingots. The drastic reduction of the solubility of nitrogen during the crystallization of the metal, owing to the formation of the ferrite component, was the principal cause of the origin of gas blowholes in high-alloy nitrogen-containing steel ingots. The formation of gas blowholes is possible with a nitrogen content in the molten metal surpassing its solubility in the crystallizing austenitic component.

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1/2 028
TITLE--OPEN CONTINUOUS BLOCKADE OF THE ABDOMINAL REFLEXOGENIC ZONES AFTER
SURGERY ON BILE PASSAGES -U-
AUTHOR--MELKUMOV, R.S.
COUNTRY OF INFO--USSR
SOURCE--VESTNIK KHIRURGII IMENI I. I. GREKOVA, 1970, VOL 104, NR 3, PP
92-94
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--REFLEX, ABDOMEN, SURGERY, BILE, ANESTHETIC, ANTIBIOTIC,
CORTICOSTEROID, LIVER, PAIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1986/0856
CIRC ACCESSION NO--AP0102817
UNCLASSIFIED
PROCESSING DATE--1195000

UNCLASSIFIED

PROCESSING DATE--11SEP70

272 028

CJRC ACCESSION NO--AP0102817

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE AUTHOR HAS ELABORATED A METHOD OF BLOCKADE OF THE ABDOMINAL REFLEXOGENIC ZONES BY MEANS OF INJECTING NOVOCAIN AND SOME MEDICAL AGENTS (ANTIBIOTICS, TRASYLOL, CORTICOSTEROIDS) IN CELLULAR SPACE OF THE ROUND HEPATIC LIGAMENT VIA A MICROCATHETER. THIS TECHNIC WAS USED IN 47 PATIENTS WITH VARIOUS ABDOMINAL DISEASES. IN 21 PATIENTS SURGERY ON BILE PASSAGES YIELDED FAVOURABLE RESULTS THAT ENABLED TO CONSIDER SUCH KIND OF A BLOCKADE AN EFFECTIVE MEASURE AGAINST PAIN AND AS PROPHYLAXIS OF EARLY POSTOPERATIVE COMPLICATIONS.

UNCLASSIFIED

USSR

MELKUMOV, S. B., All-Union Scientific Research and Experimental Design
Institute of Commercial Machinery

"Effect of the Thermal Cycle of Welding on the Corrosion Resistance of the
Near-Seam Zone of OKh21N5T Ferrite-Austenite Steel in 65% HNO_3 -Solution"

Moscow, Zashchita Metallov, Vol 9, No 2, Mar-Apr 73, pp 185-187

Abstract: Results are presented of the investigation of the effect of the thermal welding cycle on the electrochemical corrosion characteristics of OKh21N5T-type steel with different Ti and C contents, for individual temperature sections of the thermal influence zone. Heat treated specimens and fused specimens were tested for corrosion in boiling 65% HNO_3 . The test results are discussed by reference to diagrams showing the effect of cooling rate on the corrosion depth and cathodic and anodic polarization curves of OKh21N5T steel. The increase of the cooling rate and the use of steel without Ti and with low C-content (0.04%) proved to be a means of increasing the corrosion resistance of OKh21N5T steel in the thermal influence zone. Two figures, one table, six bibliographic references.

1/1

- 11 -

MELKUMOVA, G. G.

JP RS 59054
17 May 1973

UDC: 612.83.014.421.7

POSSIBILITIES OF USING INDUCED POTENTIALS IN EVALUATING
FUNCTIONAL STATE OF AUDITORY ANALYZER

[Article by G. G. Melkumova, U.S. Melkumova, Laboratory of Pathophysiology
(Chief - Professor V.M. Pashchenko) of the Institute of Physiology of the
of Kras, Novos and Novos (Director - distinguished scientist Prof. N.A.
Bobrovskiy) Moscow, Vsesoyuznyi Otorinolaringologicheskii, Russian, No 5, 1972, signed
to press 27 July 1971, pp 21-25]

Investigation of the functional state of various parts of the auditory
analyzer is enormously important for both theoretical and practical audiology.
Such investigation, however, may be done differently in relation to the periph-
eral and central parts of the analyzer. If the function of the auditory
receptor is evaluated by various indices with sufficient accuracy, determina-
tion of the auditory activity of the centers poses serious difficulties and
for this reason remains largely an unsolved problem. Successes in electro-
physiology during the last decade opened new prospects for investigation of the
central auditory analyzer function, but meanwhile auditory physiology and
audiological medicine are faced with a number of complex problems.

In light of current electrophysiological data evaluation of the state
of the auditory centers should be done either on the basis of recording of
spontaneous electric reactions or by means of investigation of induced poten-
tials. In the former case the discussion concerns the analysis and recording
of the effect of auditory stimuli on the electrical processes inherent to the
central nervous system in the state of rest. This was reflected in the wide
application of various electroencephalographic methods. However, the limitations
of these methods were rather quickly discovered. These limitations are related
primarily to the nonspecificity of the electric responses, also to the fact
that these responses are a manifestation of orientation reaction and therefore
die out rapidly.

Another possibility of electrophysiological investigation of the func-
tion of the auditory centers consists in recording the so-called induced
potentials, i.e., potentials recording response to acoustic stimuli. Here
the acoustic signals should have short duration and rapidly increasing inten-
sity. Such short signals, denoted as an acoustic click, carry no information

about the frequency characteristics, etc., about location, the electric response to the action of the acoustic click has a certain configuration with strict parameters. The described induced potential characterizes a functional state of the investigated center. Induced potentials, in contrast to changes of spontaneous electric activity, are characterized by auditory specificity; they occur only in the centers of the auditory system.

Such type of electrical reactions naturally attracts the attention of audiologists in connection with the need to develop methods of objective recording of the auditory perception process in the central parts of the analyzer. However, serious problems were encountered in the clinical study of this problem. Whereas the potentials can be measured in animals by direct insertion of electrodes into the investigated centers, it is naturally essential in clinical investigations to ensure the recording of the response from the surface of the head. To overcome this difficulty a computer is used; it affords the possibility of averaging successive multiple responses of small magnitude, whereupon they can be distinguished from the noise background. Thus, Resmond (1956), Barlow (1957), Galster and Cowdrey (1957) and other specialists were able to record the potentials in humans, induced by various sensory stimuli. Lowell (1960), et al were the first to use such a method for measuring the auditory stimulus threshold of people with normal hearing. Later on works began to appear, in which the technique of recording potentials induced in human hearing were modified and improved.

As a result methods were proposed for recording the induced potentials of humans, both for short and comparatively long stimuli. The electric response is also found to be a function of the character of the stimulus. Short stimuli (acoustic clicks) induced "fast" potentials, developing within 30-50 msec with a latent period of 10-15 msec. Long stimuli produced "slow" potentials from 100 to 500 msec with a latent period of 50 msec and longer. Each form of potential has features in relation to the point of measurement and other parts of the body. In addition to naming sensory motor or auditorotor potentials (Nast, 1963, 1965; Davis, et al 1964, among others), they also potentials (Nast, 1963, 1965; Davis, et al 1964, among others), they also named postauricular potentials (Kiang and Crist, 1963; Jacobson, et al, 1964; Ketzel and Spreng, 1965; Lowell, 1965; Yoshii, 1969; Gaudais, 1969, among others). "Slow" potentials are measured at the vertex, so they were also called "vertex" potentials. In the opinion of many investigators, three potentials may be used for recording response to tonal stimuli (Williams and Graham, 1963; Davis and Yoshii, 1963; Suzuki and Origuchi, 1969; Taguchi, et al, 1969; Bochenek, et al 1970; Gruber, 1970; Rotman, et al, 1970, among others). The physiological interpretation of induced responses to sound is quite complex and is not yet explained in many respects. The important point is that most investigators even now admit the possibility of using these potentials for objective evaluation of the auditory function and for making judgment about the character of responses of the central parts of the auditory analyzer.

There are reasons to assert that the "fast," "postauricular" induced potentials are the most accurate ones in the physiological sense. Butler, et

UDC 612.85.014.421.7

USSR

SAGALOVICH, B. M. and MELKINOVA, G. G. Laboratory of Pathophysiology, Moscow
Scientific Research Institute of Ear, Nose, and Throat

"Possibility of Using Evoked Potentials to Evaluate Acoustic Function"

Moscow, Vestnik Otorinolaringologii, No 5, 1972, pp 21-26

Abstract: In rats exposed to sounds of varying durations and intensities, prolonged tones reduced the amplitude of the evoked potentials and, in some experiments, also lengthened the latency period of the positive phase. The magnitude of the changes was determined by the intensity and frequency characteristics of the tone. The evoked potentials began to be suppressed only when a tone reached a particular intensity. With increasing intensity, they became completely suppressed. Such suppression of evoked potentials can be considered an objective test of the ability to hear sounds of different frequencies and intensities whether in the audible frequency range or in the ultrasonic part of the spectrum.

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USSR

UDC 632.954:634.8

MEL'KUMOVA, Z. SH., Turkmen Agricultural Institute

"The Effect of Herbicides on Potential Soil Contamination in Grape Fields"

Moscow, Khimiya v Sel'skoy Khozyaystve, Vol 8, No 12, Dec 70, pp 51-55

Abstract: Weeds produce tremendous amounts of seeds which are not only numerous but also can stay dormant for many years, not being affected by chemicals at that time. Therefore it is recommended to treat soil with various herbicides in order to obtain a better control of weeds. Studies have shown that treatment with herbicides lowered the seed content of the 0-5 cm deep soil layer by 29-65.2% in the first year, while in the 5-10 cm deep layer the content was lowered by 5.3-70.3%. In the second year this lowering was slightly reduced: in the 0-5 cm layer it amounted to 11.2-33.4%, and in the second -- 9.1-34.9%. In the sections treated with herbicides the contamination of the entire arable layer, i.e. 0-40 cm deep, with noxious weed seeds dropped in two years by 45.3-73.1%.

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USSR

UDC:

AKOFOVA, A. B., KARTUZHANSKIY, A. L., KAGRADZE, N. V., and ~~MEKHRIYAN, I. V.~~

"Some Changes in the Parameters of the Paths of Particles in Nuclear Emulsions Under the Effect of a Pulsed Electric Field"

Yerevan, Izvestiya Akademii Nauk Armyanskoy SSR: Fizika, Vol 6, No 6, 1971, pp 508-511

Abstract: Using the Pu^{239} alpha-particle track regression example (5.15 Mev energy) in BR-type, 200 μ nuclear emulsion layers, the authors attempt to show and evaluate information distortion. Multiple field pulses with an intensity of $(E) 1.5-6.0 \cdot 10^4$ v/cm (where the values of E are given with the dielectric properties of the emulsion layer considered) are fed onto the emulsion layer. Individual pulse duration is 3.5 msec at a frequency of 200 pulses/min. The results show a progressive decrease in the length of particle tracks as E increases at a constant number of pulses or as the number of pulses increases at a constant E. Significant changes in the angular distribution of tracks in the emulsion were observed under the effect of a pulsed electric field. The changes were of the type where the particles tended to orient along the field without regard to their initial direction. Bar graphs are given which show an increase in the dip angle of the tracks which is analogous to the shortening;
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USSR

AKOPOVA, A. B., et al., Izvestiya Akademii Nauk Armynskoy SSR: Fizika, Vol 6, No 6, 1971, pp 508-511

of their length. A similar effect in the distortion of track parameters was also observed by the authors in Ya- and N-1-type emulsion layers. The most probable explanation for the physical observation could be the effect of the pulsed electric field on the gel which changes its physico-mechanical characteristics. Original article: two figures, one table, and seven bibliographic entires.

2/2

- 97 -

USSR

UDC 539.1.073.7:77.023:534.29

AKOPOVA, A. B., MAGRADZE, N. V., MELKUMYAN, L. V., SAL'MAN, A. G., Yerevan
Physics Institute

"Acoustical Method for Processing of Glued Nuclear Emulsion Layers"

Moscow, Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, No. 6,
Nov/Dec 71, pp 441-443

Abstract: Experiments were conducted on emulsion layers of the BR type of thickness 400 and 500 μ irradiated on the Yerevan accelerator by a 3.6 Gev electron beam with an intensity of 10^{14} particles/cm². The purpose of the study was to intensify the complete cycle of processing nuclear layers with an increase in the quality of the developed image. It was shown in developing the accelerated method for emulsion layer development in the free state by means of high-frequency ultrasonic oscillations that the method is inapplicable for glued layers due to the formation of a set of bubbles caused by certain features of the ultrasound. Upon going to the region of low sound frequencies free from such undesirable effects, it was possible to completely

1/3

USSR

AKOPOVA, A. B., et al, Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, No. 6, Nov/Dec 71, pp 441-443

avoid bubbling of the layer and to develop an optimal regime for the photographic processing of glued layers in the sonic field at a frequency of 50 Hz and an amplitude of 1.5 mm. In developing the glued layers diffusion of the components of the solutions was obtained only from one surface of the emulsion layer. As distinct from sonic processing of glued layers which leads to a 4-fold acceleration of the development process, the duration of the working in this case was shortened on the average by only a factor of 2 as compared with the ordinary process. As expected the doubling of the acceleration of diffusion of the developing material in the layer and the reaction product from the layer into the solution contribute to the decrease in the grain background of fog and to a drop in the inhomogeneity of the development over the depth of the layer (10-15%), thus increasing the reliability of the identification of the events recorded. A table is given showing the photographic parameters over the depth of emulsion layers processed by the ordinary method and under acoustical oscillations. It shows that acoustical oscillations raise the sensitivity-fog ratio by 15% on the average. The greatest intensification of all stages of the photographic development was noted in stages

2/3

- 136 -

USSR

AKOPOVA, A. B., et al, Zhurnal nauchnoy i prikladnoy fotografii i kinematografii.
No 6, Nov/Dec 71, pp 441-443

for which the role of diffusion exchange played an especially great role. A rise in the rate of swelling of the emulsion layer in a sonic field, aiding the expansion of intermicellar channels and contributing to the acceleration of diffusion of thiosulphate in the gelatin to the silver halogenide crystals was established experimentally. Acoustical oscillations applied to the emulsion-solution system with a frequency of 50 Hz thus considerably reduce the activation energy for diffusion of the reacting molecules, which is verified by the growth of the relative sonic effect with an increase in the magnitude of the oscillations from 0.4 to 1.5 mm. A device for such processing is pictured.

3/3

UDC 77

USSR

AKOPOVA, A. B., MAGRADZE, N. V., MELKUMYAN, L. V.

"Effect of an Electric Field on Taking a Latent Image in Emulsion Layers"

V sb. Mezhdunar. kongress po fotogr. nauke, Moskva, 1970, Primoda fotogr. chuvstvitel'nosti (International Congress on Photographic Science, Moscow, 1970, Nature of Photographic Sensitivity -- Collection of Works), no place of publication given, Vneshtorgizdat, no year given, pp 183-186 (From PZh-Fizika, No 12(I), Dec 70, Abstract No 12D1369)

Translation: The action of 5-6 kv field pulses of 200-300 usec duration with a frequency of 10 Hz on the resorption of the latent image of relativistic particles (π -mesons or 3 Gev electrons) and slow electrons was investigated in 400 μ layers of the nuclear emulsion NIKFI-BR-1. The resorption was very clear, especially for relativistic particles, and intensified with an increase in the total number of pulses. The effect of the field on the sensitivity of the layers was slight and could be compensated by a certain lengthening of the development. The resorption action of the field is thus sharply different for sensitivity centers and latent image centers. A. L. Kartuzhanskiy.

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USSR

UDC 019.941(05)

GOR'KOVA, V.I., MELLION, S.P., ZAYTSEVA, M.A., ARAKELOVA, L.V., KASPAROVA, V.G., GODUNOVA, L.I., and KASPAROVA, S.G.

"A System for Analyzing a Documental Information Flow Consisting of Scientific Journals"

Moscow, Nauchno-Tekhnicheskaya Informatsiya, Seriya 1, Organizatsiya i Metodika Informatsionnoy Raboty, No. 4, 1971, pp 5-9

Abstract: Due partly to great irregularities in the reception of source documents by VINITI [Vsesoyuznyy Institut Nauchnoy i Tekhnicheskoy Informatsii; All-Union Institute of Scientific and Technical Information], there is a delay between the appearance of an original scientific work and VINITI's publication of an abstract of it in the appropriate Referativnyy Zhurnal (an average of 2.0-2.4 months for abstracting and editing and 1.1 month for processing are required). A study revealed that this delay could be reduced if specialized scientific journals were received directly by the editor of the appropriate abstract journal, without the usual preliminary sorting and processing. In order to carry out this study, a system for analyzing primary sources of

1/2

USSR

UDC 019.941(05)

GOR'KOVA. V.I., MELLION, S.P., et al., Moscow, Nauchno-Tekhnicheskaya Informatsiya, Seriya 1, Organizatsiya i Metodika Informatsionnoy Raboty, No. 4, 1971, pp 5-9

information -- periodic and continuing publications -- was developed and introduced. It enabled the researchers to rank the totality of source journals in descending order of frequency of inclusion of articles from them in the abstract journal for a specific field. From this ranking, a list of the most frequently used journals was obtained for the given abstract journal.

The system for analyzing primary sources, which utilized punchcard processing equipment, the Gamma-10 machine, and a Minsk-22 computer, proved to have great potentialities for the improvement of VINITI's system of information servicing and for the development of the theoretical foundations of systems and structural analysis of information flows.

Although this research was concerned with documental information flows consisting of scientific journals, analogous investigations could be carried out for patent literature and literature of other types.

2/2

- 52 -

1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC79
TITLE--CHLORINE EXCRETING RENAL FUNCTION IN CHRONIC GLOMERULONEPHRITIS -U-

AUTHOR--MELMAN, N.YA. *M*

COUNTRY OF INFO--USSR

SOURCE--VRACHI DELO 2, 135-136, ILLUS. 1970

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--KIDNEY FUNCTION, CHLORINE, EXCRETION, URINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/605007/F04 STEP NO--UR/0475/70/002/000/0135/0136

CIRC ACCESSION NO--AP0139924

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--04DEC70

2/2 013

CIRC ACCESSION NO--AP0139924

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE STUDY WAS CARRIED OUT ON 126 PATIENTS SUFFERING FROM CHRONIC GLOMERULONEPHRITIS WITH PRESERVED KIDNEY FUNCTION AND ON 30 PATIENTS WITH KIDNEY INSUFFICIENCY, ONE GROUP OF THEM HAVING THE RESIDUAL N IN THE BLOOD LOWER THAN 100 MG PERCENT, THE 2ND ONE HIGHER THAN 100 MG PERCENT. THE DAILY RHYTHM OF EXCRETION OF CL BY URINE WAS CHANGED IN PATIENTS SO THAT THE DIFFERENCE BETWEEN THE DAYTIME AND NIGHTTIME EXCRETIONS WAS LOWER THAN IN HEALTHY PERSONS. THE DECREASE IN THE CL CLEARANCE AND THE STATISTICALLY DECREASED ITS FILTRATION WERE FOUND IN ALL CHRONIC GLOMERULONEPHRITIS. THE LOADING WITH WATER CAUSED A LOWER INCREASE IN THE CLEARANCE AND FILTRATION OF CL IN PATIENTS THAN IN HEALTHY PERSONS. CHANGES IN THE CL REABSORPTION WERE NOT FOUND UNTIL THE KIDNEY DEVELOPED A TOTAL INSUFFICIENCY, DURING WHICH A STATISTICALLY SIGNIFICANT HYPERCHLOREMIA AND HYPOCHLORURIA TOOK PART.

FACILITY: KIEV RES. INST. KIDNEY URINARY DIS., KIEV,

USSR.

UNCLASSIFIED

Acc. Nr: **AP0047233**

Ref. Code: **UR0504**

PRIMARY SOURCE: **Terapevticheskiy Arkhiv, 1970, Vol 42, Nr 1 , pp 67-70**

**RENAL MECHANISM OF DISORDERS IN SODIUM
AND MAGNESIUM METABOLISM IN PATIENTS
WITH CHRONIC GLOMERULONEPHRITIS**

N. Ya. Melman

According to a specially elaborated technique a complex examination of 126 patients with different forms of chronic glomerulonephritis and of the control group of healthy individuals (43 persons) was conducted. There were revealed quantitative and qualitative disorders in a number of indices characterizing the participation of the kidneys in sodium and magnesium metabolism hyposodiemia, hypermagnesiemia, hyposodiuria, a drop in the clearance and filtration of sodium and magnesium. The authors observed a drop in the diurnal rhythm of the mentioned indices, as well as the decrease of adaptation capacity of the kidneys in patients with chronic glomerulonephritis. A degree of the detected disorders depended upon the severity of clinical manifestations of chronic glomerulonephritis which gives ground to recommend to use the given indices for the diagnosis and prognosis of the disease.

A complex study of the electrolyte excretory function of the kidneys makes it possible to understand more clearly some mechanisms of hemostasis disorders in patients with chronic glomerulonephritis..

REEL/FRAME

19790737

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1/2 025 UNCLASSIFIED PROCESSING DATE--18JCT70
TITLE--ON DESIGN AND CONTROL OF AUTOMATIC UNITS FOR EXPLORATION OF PLANET
SURFACE -U-
AUTHOR--(04)-KATYS, G.P., IIINSKIY, V.M., MELNICHENKO, I.R., ZDOR, S.E.
COUNTRY OF INFO--USSR, FRANCE
SOURCE--INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL, SYMPOSIUM ON
AUTOMATIC CONTROL, 3RD, TOULOUSE, FRANCE, MAR. 2-6, 1970, PAPER. 27 P.
DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., MECH., IND., CIVIL AND
MARINE ENGR, ASTRONOMY, ASTROPHYSICS
TOPIC TAGS--PLANETARY SURFACE, AUTOMATIC CONTROL EQUIPMENT, LUNAR SURFACE,
VEHICLE, PROGRAMMED AUTOMATIC CONTROL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1996/0008

STEP NO--UR/0000/70/000/000/0000/0000

CIRC ACCESSION NO--AT0117308

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AT0117308

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DISCUSSION OF THE BASIC CHARACTERISTICS OF UNMANNED VEHICLES WHOSE CONTROL SYSTEMS USE SELF ADJUSTING AND LOGIC CIRCUITS. THE PARAMETER DISTRIBUTION ANALYSIS PROBLEMS WHICH CAN BE SOLVED BY THE VEHICLES ARE DISCUSSED. THE LOCOMOTION TECHNIQUES OF THE VEHICLES ARE EXAMINED. THE PROGRAMMING OF THE MOTION IS CONSIDERED TAKING INTO ACCOUNT THE SCANNING AND ANALYZING CHARACTERISTICS OF THE CRAFT.

UNCLASSIFIED

Organophosphorous Compounds

UDC 541.128 + 547.451

USSR

MEL' NICHENKO, I. V., KOZLOVA, N. YA, and YASNIKOV, A. A.

"Hydrolysis of Phosphate Ester of Glyceraldehyde in the Presence of Aromatic Amines"

Kiev, Ukrainskiy Khimicheskiy Zhurnal, Vol 38, No 11, 1972, pp 1152-1155

Abstract: In contrast to results of earlier studies of the hydrolysis of the phosphate ester of glyceraldehyde (FGA) in the presence of salt buffers, aliphatic amines and diamines, FGA hydrolysis with various aromatic amines yielded a new type of catalysis. Hydrolysis of FGA was conducted in an aqueous solution at 40° in a pH interval 4-10. FGA hydrolysis kinetics were measured with the following amines: o-, m-, p-phenylenediamine, aniline, o- and p-aminophenol, p-nitroaniline, alpha-aminopyridine, N,N diethyl-p-phenylenediamine, quinone, hydroquinone, and p-nitrophenol. Reaction rate was measured by phosphate concentration level. The formation of methylglyoxal in the reaction mixture was proven by adding 2,4-dinitrophenylhydrazine to the reaction mixture. The resultant methylglyoxal hydrazone was identified by chromatography. The aromatic amines are classified into 3 groups of catalysts on the basis of rate dependence on pH. The first group (p-phenylenediamine,

1/ 3

USSR

MEL'NICHENKO, I. V., et al., *Ukrainskiy Khimicheskiy Zhurnal*, Vol 38,
No 11, 1972, pp 1152-1155

p-aminophenol) shows a sharp maximum in the reaction rate in the pH 5-7 range. The second (aniline, o- and m-phenylenediamine, O-aminophenol, p-nitroaniline) show only a slight maximum in reaction rate in the pH < 7 range. The third group (alpha-aminopyridine, N,N diethyl-p-phenylenediamine, p-nitrophenol, quinone, hydroquinone), like the buffer salts show little if any significant catalytic activity. Thus, the most effective catalysts are p-phenylene diamine and p-aminophenol. The end of the hydrolysis is due to the formation of dihydroxyacetone phosphate. The rate of hydrolysis is directly proportional to the concentration of p-phenylenediamine, with addition of acetate, pyridine, and aniline showing no effect on the reaction rate in the presence of p-phenylenediamine.

p-Phenylenediamine and p-aminophenol sharply differ from other catalysts studied not only in the rate of catalysis but also in the very shape of their curve of reaction rate dependence on pH. This specific catalysis appears to be manifested only in the para structure. Thus the action of these catalysts is connected with their formation of quinoid intermediates. The lack of

2/3

- 16 -

USSR

MEL'NICHENKO, I. V., et al., *Ukrainskiy Khimicheskiy Zhurnal*, Vol 38, No 11, 1972, pp 1152-1155

catalysis by o-substituted amines is explained by the instability of the o-quinoid intermediates. A scheme for quinone formation via hydride ion transfer is given. At $\text{pH} > 5.9$ the reaction rate is limited by the rate of acid-catalyzed dehydration. At lower pH levels hydrolysis rate is lowered due to protonation of the amine. The existence of a reaction rate dependence on pH rules out quinone formation as a limiting factor in FGA hydrolysis. The catalytic activity of aniline and other similar catalysts in FGA hydrolysis is similar to the catalytic activity of butylamine.

3/3

USSR

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VDC 621.385.832:681.327.67
MALKIYEL', B. S., DEDIK, O. O., MEL'NICHENKO, L. P., VASHCHENYUK, N. N.

"Storage Cathode Ray Tube"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzyy, Tovarnyye Znaki,
No 16, 8 May 70, p 32, Patent No 259981, Filed 11 Feb 67

Translation: This Author's Certificate introduces a storage cathode ray tube with a visible image and pickup of the analog signal containing an electron gun, a deflecting system, and a storage unit comprising a distributed cathode, a collector and a target. The tube is distinguished by the fact that in order to improve uniformity with respect to the read signal amplitude the tube contains a collimating lens and a retarding grid with a screen ring in front of the collector on the electron gun side.

1/1

- 322 -

1/2 012
TITLE--SYNTHESIS OF TIN AND GERMANIUM TETRAACYLATES -U-
AUTHOR-(03)-MELNICHENKO, L.S., ZEMLYANSKIY, N.N., SAMURSKAYA, K.A.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(2), 351-3
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANOTIN COMPOUND, TIN COMPOUND, ACYL RADICAL,
ORGANOGERMANIUM COMPOUND, GERMANIUM COMPOUND, ORGANOMERCURY COMPOUND,
CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/1556

STEP NO--UR/0020/70/190/002/0351/0353

CIRC ACCESSION NO--AT0116964

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 012
CIRC ACCESSION NO--AT0116964
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ADDING 58.56 G SNAR SUB4 TO 95 G
BU SUB2 SN (OAC)SUB2 IN ET SUB2 O GAVE 91.2PERCENT SN(OAC)SUB4, M.
238-9DEGREES. THE YIELD WAS 80PERCENT IN REFLUXING HEXANE; IT WAS
90PERCENT FROM SNI SUB4 AND BU SUB2 SN(OAC)SUB2 IN HOT HEXANE.
SIMILARLY WAS PREPD. 72.9PERCENT SN(O SUB2 CET)SUB4, M. 134-5DEGREES.
BU SUB2 SN(OAC)SUB4 AND GEOR SUB4 GAVE 96.9PERCENT GE(OAC)SUB4, M.
155-6DEGREES. GE(O SUB2 CET)SUB4M N, 90-10DEGREES, WAS SIMILARLY PREPD.
REFLUXING SN (OAC)SUB2 AND HG(OAC)SUB2 IN AC SUB2O GAVE HG, AND
90.3PERCENT SN(OAC)SUB4. EQUI MOLAR AMTS. OF BU SUB2 SN(OAC)SUB2 AND
SNCL SUB4 IN C SUB6 H SUB6 GAVE 82PERCENT (ACD)SUB2 SNCL SUB2, DECOMPO.
187-90DEGREES. THIS ALSO FORMED IN AC SUB2 O FROM HG(OAC)SUB2 AND SNCL
SUB2.
FACILITY: FIZ. KHIM. INST. IM. KARPOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 021 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--SYNTHESIS OF UNSYMMETRICAL ORGANOTIN COMPOUNDS -U-

AUTHOR-(03)-MELNICHENKO, L.S., ZENYANSKIY, N.N., KOCHESHKOV, K.A.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(3), 597-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANOTIN COMPOUND, ORGANOLITHIUM COMPOUND, CHEMICAL
SYNTHESIS, UV LIGHT, THERMAL DECOMPOSITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1984/1563

STEP NO--UR/0020/70/190/003/0597/0599

CIRC ACCESSION NO--AT0100181

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--18SEP70

2/2 021

CIRC ACCESSION NO--ATO100181

ABSTRACT/EXTRACT--(U) CP-0-

ABSTRACT. REACTION OF PHLI WITH RSNCL SUB3 IN ET SUB2 0 AT MINUS 20DEGREES GAVE ETPH SUB3 SN AND BUPH SUB3 SN. KEEPING 2 MOLES ETSNCL SUB3 AND 1 MOLE ETPH SUB3 SN IN UV LIGHT 2.75 HR AT SMALLER THAN 35DEGREES GAVE 90.9PERCENT ETPHSNCL SUB2, M. 66DEGREES, ALSO FORMED FROM THIS MIXT. I 1.5 HR AT 140DEGREES. SIMILARLY BUSNCL SUB3 AND BUPH SUB3 SN GAVE 90.3PERCENT BUPHSNCL SUB2, M. 50DEGREES. AT ROOM TEMP., THE REACTION IS SLOW AND REQUIRES 5 DAYS FOR 65PERCENT CONVERSION. ETPHSNCL SUB2 AND AQ. KF GAVE 95PERCENT ETPHSNF SUB2, DECOMPD. LARGER THAN 300; BUPHSNF SUB2, DECOMPD. LARGER THAN 250DEGREES, WAS PREPD. SIMILARLY. BUPHSNF SUB2 AND PHLI IN ET SUB2 0 AT MINUS 25DEGREES GAVE 92.7PERCENT BUPH SUB3 SN, M. 61DEGREES.

UNCLASSIFIED

1/2 008 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--PHASE COMPOSITION OF CARBONIFEROUS FERROCHROMIUM SLAGS DURING
OPERATIONS USING MAGNESIAN CHROMIUM ORES -U-
AUTHOR--(05)--KATS, M.SH., ZHURAVLEV, V.M., AGANICHEV, P.V., MELNICHENKO,
N.V., UMAROV, K.U.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (1), 74-9
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, CHEMISTRY
TOPIC TAGS--FERROCHROMIUM, METAL ORE, ELECTRIC CONDUCTIVITY, SPINEL,
MAGNESIUM COMPOUND, CHROMIUM COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1984/0157

STEP NO--UR/0370/70/000/001/0074/0079

CIRC ACCESSION NO--AP0054953

UNCLASSIFIED

2/2 008

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054953
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE PHASE COMPN. OF FERROCHROMIUM
SLAGS WAS DETD. BY CHEM. AND MINERALOGICAL ANAL. THE CALCN. WAS BASED
ON THE FACT THAT MGO DOES NOT TAKE PART IN THE CR SPINEL COMPLEX AND
FORMS A PART OF THE ORTHOSILICATES. THE OXIDES OF THE R SUB2 O SUB3
TYPE DO NOT DISSOLVE IN ORTHOSILICATES, AND THEY ARE DISTRIBUTED BETWEEN
THE CR SPINEL AND THE GLASS. THE HIGH CONTENT OF PICOCHROMITE IN THE
CR ORE AND THE EXCHANGE OF AL SUB2 O SUB3 AND CHROMIC OXIDE IN THE
SPINEL PHASE OF CARBONIFEROUS FERROCHROMIUMS NEG. AFFECT THE REDN. THE
ELEC. COND. IS IMPROVED BY AN INCREASED VALUE OF THE RATIO MGO:AL SUB2 O
SUB3.

UNCLASSIFIED

USSR

UDC 661.143.620.179.05(086.8)

MALKES, L. YA., OL'GINSKIY, A. G., KRASOVITSKIY, B. M., KHEBIZOV-PEPAGSYAN, O. P., STAROSEL'SKIY, A. A., and MEL'NICHENKO, P. A.

"A Luminescent Paste for Flaw Detection on Porous Materials"

USSR Author's Certificate No 329191, filed 24 Jul 70, published 20 Mar 72 (from RZh-Khimiya, No 22, Nov 72, Abstract No 224152P)

Translation: A luminescent paste for flaw detection on porous materials has been developed which reveals flaws over a wide range of dimensions. Example. Preparation of the luminescent past, and technique for using it: 0.075 g 1,8-naphthylene-1',2'-benzimidazole is dissolved with heating to 80°C in 100 g of mineral oil, the solution is cooled and thoroughly mixed in a mortar with 100 g of MgO. The resultant paste is applied to the surface of the material (refractories, porous glass, artificial stone) and thoroughly rubbed in. The excess is removed and the material is observed in ultraviolet light; glowing defects are clearly visible on the surface. When detecting flaws in concrete and ceramics, the materials to be tested are soaked in water before application of the paste; this prevents penetration of the luminescent paste into the fine pores (less than one micron) inherent in the nature of the material, and as a consequence prevents fluorescence of the

1/2

USSR

MALKES, L. YA., et al., USSR Author's Certificate No 329191, filed 24 Jul 70, published 20 Mar 72

entire surface under ultraviolet light which would make it impossible to pick out the flaws against the overall glow of the background. K_2O adsorbs the luminescent oil, which then gradually flows into the defects, enables thorough washing of the luminescent paste from the surface of large defects (bigger than 1000 microns). The proposed paste can be used for quality control of raw material and finished goods on various stages of the technological process and in use, and does not require complicated special equipment. The composition of the proposed paste (in wt.%): 1,8-naphthoylone-1',2'-benzimidazole 0.04, mineral oil 49.98, mercuric oxide 49.98. N. Sh.

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USSR

UDC: 621.43.001.3

ANTONOV, O. G., DOLINSKIY, D. V., MARCHEVSKIY, V. P., ~~MITCHENKO, B. V.~~,
OTSECHKIN, Yu. G., PAVLENKO, G. V., TOVKANETS, V. Ye., ~~SARAFIYEV, K. E.~~,
Institute of Automation, Khar'kov Polytechnical Institute

"An Antistall Device"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraboty, Tovarnyye Znaki,
No 13, May 72, Author's Certificate No 335444, Division F, filed 21 Sep 70,
published 11 Apr 72, p 140

Translation: This Author's Certificate introduces an antistall device which may be used for controlling centrifugal compressors. The device contains pickups for the rate of flow and pressure drop across the compressor, an amplifying adder and a regulating valve installed on a bypass line between the pressure and suction channels. As a distinguishing feature of the patent, in order to improve the reliability and accuracy of maintaining the limiting flow rate, a pickup is connected to the amplifying adder which measures the difference in pressures between the wake and barrel of the flow behind the vanes of the exit guide cone to correct control in accordance with variation of the static characteristic of the compressor.

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USSR

UDC 576.858.75(A2).06

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RITOVA, V. V., SCHASTNYI, E. I., OGANESYAN, O. T., CHEBOTAREV, Y. V., MOISEYEV, V. P., LARIONOV, A. S., BYKOVSKIY, A. F., SOKOLOVA, N. N., and ~~NEPOMUCHENKO~~ YE. N., Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, Moscow

"Study of Influenza A2 Virus Strains Isolated During the 1968-1969 Epidemic from Children in Moscow and in the Moscow Region"

Moscow, Voprosy Virusologii, No 3, May/Jun 1971, pp 291-196

Abstract: Since 1957, there have been five influenza epidemics in the USSR caused by the A2 virus: in 1957, 1959, 1962, 1965 and 1968-1969. The last one was produced by a newly formed variant of the virus and began in July in Hong-Kong, subsequently spread over Japan, and hit the countries of South-east Asia and the US. In fall 1968 there was a sharp rise in the influenza incidence in England and in other countries of Central Europe. In December, individual A2 and B influenza foci were reported in the Soviet Union in organized children's collectives (child care centers, schools, etc), and by the middle of January in many cities of the USSR, the incidence of influenza surpassed the mean seasonal rate by a factor of five. From 350 sick children 141 strains of the flu virus were isolated from nasopharyngeal washings.

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USSR

RITOVA, V. V., et al., Voprosy Virusologii, No 3, May/Jun 71, pp 291-296

Diagnosis was confirmed serologically. All strains had high receptor activity and were antigenically identical. Neutralization tests showed that the 1969 flu virus is not a new serotype. A structural study showed that the virus consisted of spherical (diameter 2000-3500Å) and filiform, (diameter of the nucleus 700-900Å, length to several microns) structures. Sera from guinea pigs and horses inhibited hemagglutination of the newly separated strains. The effect of sera was not completely removed after heating to 57°C for 30 minutes and processing with KIO_4 , but was removed by treatment with cholera vibrios. Only two strains were inhibitor-resistant, all remaining strains were inhibitor-sensitive. The isolated strains were readily adaptable to white mice and from the second or third passage produced death and lung lesions in test animals. Also, in mice, the strains exhibited toxic properties. The immunological responses in convalescents and in immunized animals were high.

2/2

- 46 -

Polymers and Polymerization

USSR

UDC 678.744.422-19:546.98

SHVETS, T. M., MIKHALYUK, S. A., MEL'NICHENKO, Z. M., BOTVINOV, V. A., and
ARYUPINA, K. A., Institute of Colloidal Chemistry and Chemistry of Water,
Acad. Sc. UkrSSR

"Electroconductivity of Metallopolymers Based on the Alloy Fe-Co-Ni and the
Copolymers of Vinyl Chloride With Vinyl Acetate"

Kiyev, Ukrainskii Khimicheskii Zhurnal, Vol 39, No 3, Mar 73, pp 258-261

Abstract: Experimental data have been reported on the value of electrocon-
ductivity in relationship to the nature of polymer, composition of metallo-
polymer, and the temperature of treatment of the metallopolymer obtained by
electrolytic method from the alloys consisting of iron-cobalt-nickel and
copolymers of vinyl chloride with vinyl acetate. It has been shown that
the electroconductivity depends on the composition of the metallopolymers
and on the temperature of preliminary treatment.

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USSR

UDC 621.538.669

SHVETS, T. M., IVANOVA, L. YU., MEL'NICHENKO, Z. M., MISHCHENKO, E. G., and NATANSON, E. M., (DECEASED), Institute of Colloidal and Water Chemistry, AN Ukr SSR

"Magnetic Properties of Highly Disperse Iron-Cobalt-Nickel Alloy Powders"

Kiev, Akademiya Nauk Ukr SSR, Poroshkovaya Metallurgiya, No 7, Jun 72, pp 71-75

Abstract: Experimental results of a study of the effect of various electrolysis parameters (electrolyte concentration and acidity, cathode current density, cathode material, and the presence of additives) and of the alloy composition on the magnetic properties of highly disperse ternary iron-cobalt-nickel alloys are presented. The analysis shows that the most significant effect on the magnetic properties is produced by electrolyte concentration. Thus, by increasing concentration from 50 to 500 gr/l (iron, cobalt, and nickel chlorides) the coercive force drops from 800 to 300 oe, and this is related to significant coarsening of alloy particles.

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USSR

UDC 543.251.669.017.1

SHVETS, T. M., MEL'NICHENKO, Z. M., VASILENKO, V. P., IVANOVA, L. YU., and NATANSON, E. M., Institute of Colloidal Chemistry and Water Chemistry, Academy of Sciences Ukrainian SSR

"Effect of Additives on the Electrodeposition of Iron-Cobalt-Nickel Ternary Alloys"

Kiev, Poroshkovaya metallurgiya, No 3, 1972, pp 12-17

Abstract: Cited are the experimental results of a study of the effects of various additives (both inert and surface-active compounds) on the electrodeposition of highly dispersed layers of Fe-Co-Ni alloys, their structure, and the size and shape of the particles formed in the double-layer bath. Measurements of the magnetic properties of the highly dispersed Fe-Co-Ni alloy powders produced in the presence of additives indicate the coercive force to be slightly lower in all cases; the residual inductance increases due to the high dispersity and the marked anisotropy of the single. The study shows the potential changes in the structure of the deposit as a function of one electrodeposition additive on another. (2 illustrations, 2 tables, 5 bibliographic references)

1/1

USSR

UDC: 621.372.54

YANY SHEV, P. K., MEL'NICHUK, A. Ya.

"An Electromechanical Band Filter"

USSR Author's Certificate No 257635, filed 28 Dec 67, published 20 Nov 70
(from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 67437 F)

Translation: An electromechanical band filter is proposed which contains a T-shaped resonator which operates in the flexural vibration mode, one permanent bar magnet and input and output electromagnetic converters, the ends of the resonator fitting in the converter gaps. To simplify manufacture of the filter, the base of the T-shaped resonator is fastened to a support which is not connected to the magnetic circuit of the filter, and the ends of the permanent magnetic are directly connected to the magnetic circuits of the input and output converters.

1/1

- 72 -

1/2 016 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--AVIDIN EFFECT ON INTENSITY OF C PRIME14 INCORPORATION FROM NANC
PRIME14 & SUB3 AND GLYCINE,1,C PRIME14 INTO PROTEINS AND LIPIDS OF RAT
AUTHOR--(02)-GULIY, M.F., MELNICHUK, D.O.

COUNTRY OF INFO--USSR

SOURCE--UKRAYAS'KIY BIKHIMICHNIY ZHURNAL, 1970, VOL 42, NR 3, PP 322-324

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CARBON ISOTOPE, CHEMICAL LABELLING, PROTEIN, LIPID, LIVER,
CELL PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO---FD70/605044/808 STEP NO---UR/C3DD/10/D42/003/0322/0324

CIRC ACCESSION NO--AP0142944

UNCLASSIFIED

2/2 016

UNCLASSIFIED

PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0142944

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE AVIDIN EFFECT WAS STUDIED ON INTENSITY OF C PRIME14 INCORPORATION FROM NAHC PRIME14 D SUB3 AND GLYCINE,1,C PRIME14 INTO PROTEINS AND LIPIDS OF RAT LIVER HOMOGENATES. AS A RESULT, IT IS SHOWN THAT AVIDIN, INHIBITING THE FIXATION OF CO SUB2, APPROXIMATELY TO THE SAME DEGREE INHIBITS THE INCORPORATION OF C PRIME14 FROM GLYCINE,1,C PRIME14 INTO PROTEINS AND LIPIDS.
FACILITY: INSTITUTE OF BIOCHEMISTRY, ACADEMY OF SCIENCES, UKRAINIAN SSR, KIEV.

UNCLASSIFIED

USSR

UDC: 621.374.5(088.8)

MEL'NICHUK, L. P., GRECHKO, E. N., Institute of Electrodynamics, Academy
of Sciences of the UkrSSR

"A Control Pulse Shaper for a Single-Phase Frequency Converter"

USSR Author's Certificate No 264525, filed 2 Feb 68, published 24 Jun 70
(from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 126272 F)

Translation: This Author's Certificate introduces a control pulse shaper for a single-phase frequency converter. The shaper contains register cells and a master oscillator. For purposes of simplification, the shaper consists of four shift register cells, the first and second cells being triggered from positive half-waves, while the third and fourth are triggered from negative half-waves of the master oscillator voltage.

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USSR

UDC 621.314.58(088.8)

VOLKOV, I.V., LIPKOVSKIY, K.A., MEL'NICHUK, L.P., GRECHKO, E.N. [In-t elektrodinam. AN USSR--Institute Of Electrodynamics, AS, UkrSSR]

"Frequency Converter"

USSR Author's Certificate No 265256, filed 27 May 68, published 22 June 70
(From RZh--Elektronika i yeye primeneniya, No 3, March 1971, Abstract No 3B578P)

Translation: A frequency converter with a d-c section includes a single-rectifier [ventil'] series inverter at the output. With the object of improving the energy characteristics and increasing the security between the rectifier [vypryamitel'] and the source of a-c current, a converter of a source of voltage into a source of current (e.g., an inductive-capacitance converter) is included. 2 ill. A.S.

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- 15 -

USSR

UDC 621.311.153.018.3

GRECHKO, E. N., and MEL'NICHUK, L. P.

"Synthesis of Optimal Filters for Voltage Inverters Made of Controlled Rectifiers"

V sb. Probl. tekhn. elektrodinamiki (Problems of Technical Electrodynamics -- collection of works), vyp. 24, Kiev, Naukova Dumka Press, 1970, pp 88-91 (from RZh-Elektrotehnika i Energetika), No 4, Apr 71, Abstract No 4 Ye244)

Translation: The current and voltage transfer functions of a reactive four-terminal network are analyzed with application of the conditions of formation of sinusoidal voltage at the output independently of the magnitude of the load. The value of the optimal transfer coefficient and power on the basic harmonic is obtained. It is demonstrated that the corresponding filter is an L-type network. The schematic solutions of the filters are found with introduction of additional resonance circuits adjusted to the frequencies of the highest harmonics which are largest with respect to amplitude. There are 3 illustrations and a 5-entry bibliography.

1/1

Luminescence

UDC 535.37.541.77

USSR

BELOUS, V. M., MEL'NICHUK, L. P., ORLOVSKAYA, N. A., and CHIBISOV, K. V., Odessa Construction Engineering Institute, Odessa, Ministry of Higher and Secondary Specialized Education Ukrainian SSR; Corresponding Member of the Academy, Moscow State University imeni M. V. Lomonosov, Moscow, Ministry of Higher and Secondary Specialized Education USSR

"Mechanism of the Formation of Photographic Sensitivity of Bromiodo-silver Emulsions as Investigated by the Luminescence Method"

Moscow, Doklady Akademii Nauk SSSR, Vol 193, No 5, Aug 79, pp 1066-1089

Abstract: Data are reported on the study of luminescent and photographic properties of AgBr(I) subjected to the action of a solution of hydrazine chloride and thiourea. The results obtained showed that the ratio of I_2/I_1 -- intensity at a selected band to the maximum in the green band from the range of orange-red luminescence -- increases after treatment with solutions of thiourea and hydrazine chloride, indicating that in case of sulfur sensitization silver centers may form similar to those forming during reductive sensitization. The digestive action of thiourea is also very important in this process. The increase in light sensitivity of the investigated materials is accom-

USSR

BELOUS, V. M., et al, Doklady Akademii Nauk SSSR, Vol 195, No 5,
Aug 70, pp 1086-1089

panied by an increase in the I_2/I_1 ratio. On the other hand, appearance of silver sulfide microcrystals on the surface of AgBr $\cdot$ results in a lowered I_2/I_1 , meaning that the light sensitivity is principally predetermined by the atom-molecular dispersed silver centers, a portion of which is responsible for the orange-red band in the luminescence at low temperature. This principally holds for low sensitivity emulsions; highly sensitive emulsions did exhibit a flash of orange-red luminescence in some cases, and the reason for this is still unknown. It is proposed that the center of green luminescence of the microcrystals consists of an iodide ion and some kind of a defect. The energy resulting from the recombination of the free hole and the electron localized on the defect is transmitted to the iodide ion, and excites it.

1/2 020 UNCLASSIFIED M PROCESSING DATE--02 OCT 70
TITLE--MAGNETO SEMICONDUCTING MODULATION TRANSFORMERS OF FREQUENCY -U-

AUTHOR--1021-TONKAL, V.YE., MELNICHUK, L.P.

COUNTRY OF INFO--USSR

SOURCE--MAGNETO SEMICONDUCTING MODULATION TRANSFORMERS OF FREQUENCY
(MAGNITO POLYPROVODNIKOVYYE MODULYATSIONNYYE PREDBRAZOVATELI CHASTOTY)
DATE PUBLISHED-----70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR.

TOPIC TAGS--MAGNETIC TRANSFORMATION, ELECTRONIC TRANSFORMER, SEMICONDUCTOR
DEVICE, ELECTROMAGNET COMPONENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1991/0574

STEP NO--UR/0000/70/000/000/0001/0189

CIRC ACCESSION NO--AM0110368

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AM0110368

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: INTRODUCTION
3. CHAPTER I GENERAL PROBLEMS IN THE CONSTRUCTION OF MODULATION
FREQUENCY TRANSFORMERS 5. II THE AMPLITUDE MODULATION OF ALTERNATING
VOLTAGE IN MAGNETO SEMICONDUCTING FREQUENCY TRANSFORMERS 15. III THE
CHARACTERISTICS OF THE WORK OF ELECTROMAGNETIC ELEMENTS IN TRANSFORMERS
44. IV ELECTRO MAGNETIC AND MAGNETO SEMICONDUCTING MODULATORS OF
FREQUENCY TRANSFORMERS 87. V ANALYSIS OF THE WORK AND CHARACTERISTIC
OF AN ELECTROMAGNETIC TRANSFORMER OF REGULATED FREQUENCY 116. VI
ELECTROMAGNETIC TRANSFORMERS OF FREQUENCY WITH STEPPED UP POWER INDEXES
139. VII MAGNETO SEMICONDUCTING FREQUENCY TRANSFORMERS 166.
LITERATURE 186. IN THIS MONOGRAPH ARE DESCRIBED BASIC PROBLEMS OF
THEORETICAL AND EXPERIMENTAL INVESTIGATION OF STATIC FREQUENCY
TRANSFORMERS OF MODULATION TYPE, CONSTRUCTED ON ELECTROMAGNETIC AND
SEMICONDUCTING ELEMENTS. THE BOOK IS FOR A WIDE RANGE OF SCIENTISTS AND
ENGINEERS.

UNCLASSIFIED

USSR

UDC: 621.372.852.1

FIRSOV, Ye. L., MELNIK, A. I., BOBYSHEV, V. M.

"A Measurement Cavity for an Electron Paramagnetic Resonance Spectrometer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratki, Tovarnyye Znachki, No 7, Mar 72, Author's Certificate No 329655, Division H, filed 30 Jun 70, published 9 Feb 72, p 221

Translation: This Author's Certificate introduces a measurement cavity for an electron paramagnetic resonance spectrometer. As a distinguishing feature of the patent, the space factor of the cavity is optimized, and the sensitivity of the spectrometer is accordingly maximized when studying specimens with high dielectric losses by partially shielding the specimen from the electromagnetic field of the cavity. Shielding is accomplished by two sections of current-conducting tube or a conductive helix if the cavity is rectangular, and by the inner conductor of the cavity if it is coaxial.

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- 112 -

1/2 021 UNCLASSIFIED PROCESSING DATE--LISEP70
TITLE--STRUCTURES OF INDIUM AND LEAD IN THE LIQUID PHASE -U-

AUTHOR--ROMANOVA, A.V., MELNIK, B.A. M

COUNTRY OF INFO--USSR

SOURCE--UKR. FIZ. ZH. (RUSS. ED.) 1970, 15(1), 101-6

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--X RAY ANALYSIS, LEAD, INDIUM, SPECIFIC DENSITY, MOLECULAR
STRUCTURE, FLUID PHASE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/1279

STEP NO--09/0185/70/015/001/0101/0106

CIRC ACCESSION NO--AP0107755

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UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107755

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STRUCTURE OF FUSED METALLIC IN AND
PB WAS STUDIED BY HIGH RESOLN. X RAY TECHNIQUE AT 160-400 AND
340-400DEGREES, RESP. IN OPPOSITION TO THE PUBLISHED DATA, THE EXPT.
REVEALS A COMPLEX STRUCTURE OF MAX. AND, IN THE CASE OF PB, THE MAX. WAS
SPLIT INTO A DOUBLET. THE MELTS HAD MICROREGIONS OF SHORT RANGE ORDER
THAT CAUSED A NONUNIFORM D. OF THE SAMPLES.

USSR

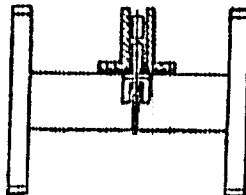
UDC: 621.317.799

MEL'NIK, B. V., MOROKOV, F. A., BRIDAVSKIY, V. L.

"A Waveguide Pickup for Checking Transmitted SHF Power"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzy, Tovarnyye Znaki, No 30, Oct 71, Author's Certificate No 317000, Division G, Filed 7 Feb 70, published 7 Oct 71, p 158

Translation: This Author's Certificate introduces a waveguide pickup for checking transmitted SHF power. As a distinguishing feature of the patent, the device is designed for checking low-level SHF power transmission in a waveguide channel without using intermediate connecting elements. A semiconductor measurement thermistor is connected to the narrow wall of the waveguide at the point where the electric component of the electromagnetic field vanishes. Connection is made through narrow transverse slots in the waveguide walls.



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USSR

UDC 612.766.2

MEL'NIK, B. Ye., and PALADIY, Ye, S., recommended by the Chair of Human and Animal Physiology, Kishinev State University imeni V. I. Lenin

"Catecholamine Concentration in Adrenal Glands and Various Brain Areas During Hypokinesia and After Injection of Some Neurotropic Agents"

Moscow, Biologicheskiye Nauki, No 11(107), 1972, pp 45-49

Abstract: In rats severely restricted in their motor activity for periods up to 3 weeks, pronounced changes develop in the balance of catecholamines: adrenalin concentration increases while noradrenalin concentration decreases in the adrenal glands, medulla, hypothalamus, hemispheres, and cerebellum. These changes can be diminished or magnified by selected neurotropic drugs. Thus, melipramine (nervous system stimulant, given in doses of 6 mg/kg) increases adrenalin and noradrenalin concentration in all the structures mentioned above, while spasmolytin (M-cholinolytic compound, given in doses of 4 mg/kg) increases adrenalin concentration in the adrenal glands and decreases it in the hemispheres.

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UDC 51

USSR

MEL'NIK, I. M.

"Problem of Maximum Dynamic Flow in a Network"

V sb. Mat. metody issled. i optimiz. sistem (Mathematical Methods of Investigation and Optimization of Systems — collection of works), Kiev, 1971, pp 157-163 (from RZh-Kibernetika, No 9, Sep 72, Abstract No 9V474)

Translation: The investigated problem is formulated in the following way. A network is presented each arc (i, j) of which is assigned two positive integers: r_{ij} is the carrying capacity of the arc, τ_{ij} is the time for passage through it. Two vertices are isolated: the source s and the drain t . It is necessary to define the maximum amount of the flow which can be moved in the time T from s to t . The notation for the problem is presented in the form of a model of linear programming, and the method of its solution which is a generalization of the tag method of Ford and Fulkerson for the problem of a stationary flow is given. From the algorithm it follows that the optimal values of the variables will automatically be integral. A procedure is presented for reducing the dynamic network to a stationary network. It is pointed out that the solution of the dynamic problem by reducing it to a stationary problem with large network dimensions is disadvantageous as a result of strong "blowing" of the corresponding stationary problem.

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- 13 -

1/2 036 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--PRIMARY PARTIAL RESECTIONS BY MECHANICAL SUTURE IN BLIND
PENETRATING WOUNDS OF THE LUNGS ON A BACKGROUND OF ACUTE RADIATION
AUTHOR--MELNIK, L.A.

COUNTRY OF INFO--USSR

SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, 1970, NR 3, # 122-123

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LUNG, SURGERY, WOUND, RADIATION SICKNESS, DOG, PNEUMONIA,
SUTURE, SURGICAL INSTRUMENT/(U)UKL60 SURGICAL INSTRUMENT, (U)UKL60
SURGICAL INSTRUMENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0405

STEP NO--UR/0177/70/000/003/0122/0123

CIRC ACCESSION NO--AP0135879

UNCLASSIFIED

2/2 036

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135879

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TO STUDY THE POSSIBILITY OF PRIMARY ECONOMICAL RESECTIONS OF THE LUNGS BY MEANS OF UKL 40 AND UKL 60 IN BLIND PENETRATING WOUNDS OF THE LUNGS ON A BACKGROUND OF RADIATION ILLNESS, EXPERIMENTS WERE CONDUCTED ON 72 DOGS (60 IRRADIATED AND 12 CONTROLS). ACUTE RADIATION ILLNESS WAS BROUGHT ABOUT BY TOTAL EXTERNAL RADIATION BY MEANS OF RUM 3 APPARATUS (DOSE OF 400 R). IN DIFFERENT PERIODS OF ACUTE RADIAL ILLNESS BLIND PENETRATING WOUNDS OF THE LUNGS WERE MADE ON THE ANIMALS AND AFTER TWO HOURS A LOBECTOMY WAS MADE OF THE RIGHT UPPER LOBE BY MEANS OF THE UKL 40 AND MARGINAL RESECTIONS OF THE RIGHT LOBE BY MEANS OF THE UKL 60, AND COMPLEX THERAPY OF ACUTE RADIATION ILLNESS WAS CARRIED OUT SIMULTANEOUSLY. THE CONTROL ANIMALS RECOVERED AFTER THE OPERATION; OF 60 IRRADIATED, 45 RECOVERED, THE REST DIED AS A RESULT OF PROGRESSION OF THE RADIAL ILLNESS AND THE DEVELOPMENT OF PNEUMONIA. THE EXPERIMENTS SHOWED THAT PRIMARY PARTIAL RESECTION BY MECHANICAL SUTURE IN THE INITIAL PERIOD OF RADIATION ILLNESS AND IN THE PERIOD OF RECOVERY ARE VERY EFFECTIVE AND GIVE A HIGH SURVIVAL OF ANIMALS. CARRIED OUT IN THE LATENT PERIOD AND ESPECIALLY IN THE PHASE OF CLIMAX OF RADIATION ILLNESS, THOSE INTERVENTIONS ARE ACCOMPANIED BY A SEVERE POSTOPERATIONAL COURSE, VARIOUS COMPLICATIONS AND A RELATIVELY HIGH MORTALITY. THE OBTAINED DATA PERMIT RECOMMENDING WIDER APPLICATION OF PRIMARY ECONOMICAL RESECTIONS OF THE LUNGS WITH THE UKL 40 AND UKL 60 APPARATUS WHEN THERE ARE BLIND PENETRATING WOUNDS OF THE LUNGS ON A BACKGROUND OF ACUTE RADIATION ILLNESS.

UNCLASSIFIED

1/2 025 UNCLASSIFIED
TITLE--A MODIFICATION OF NEPHROPEXY -U-

PROCESSING DATE--090CT70

AUTHOR--MELNIK, L.A.

COUNTRY OF INFO--USSR

SOURCE--KHIRURGIYA, 1970, NR 3, PP 117-121

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--KIDNEY, SURGICAL IMPLANT, MUSCLE TISSUE, CLINICAL MEDICINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1983/1181

STEP NO---OR/0531/70/000/003/0117/0121

CIRC ACCESSION NO--AP0054080

UNCLASSIFIED

2/2 025

UNCLASSIFIED

PROCESSING DATE--09OCT70

CIRC ACCESSION NO--APO054030

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DURING THE LAST YEARS MUSCLE GRAFT NEPHROPEXY AFTER RIVOIR IN PYTEL LDPATKIN MODIFICATION HAS BEEN EMPLOYED CLINICALLY. HOWEVER THIS MODIFICATION IS COMPLICATED AND HAS SHORTCOMINGS IN THAT IN DETACHMENT OF THE FIBROUS CAPSULE AND IN THE FORMATION OF A TUNNEL OR IN PASSING OF THE MUSCLE GRAFT THROUGH THIS TUNNEL THE FIBROUS CAPSULE RUPTURES AND IT IS IMPOSSIBLE TO STITCH A FLAP THERETO. THE AUTHOR PROPOSES TO RESECT THE FIBROUS CAPSULE AND NOT TO PASS THE GRAFT SUBCAPSULARLY, BUT TO PASS IT UNDER THE LOWER POLE OF THE KIDNEY, ARRANGE THE FLAP ON ITS ANTERIOR SURFACE AND SUTURE IT TO THE NONDETACHED FIBROUS CAPSULE. IN THE PRESENCE OF A SIGNIFICANT NEPHROPTOSIS AND ROTATION OF THE KIDNEY THE AUTHOR PROPOSES TO EMPLOY SUPRACAPSULAR NEPHROPEXY WITH A DOUBLE MUSCLE GRAFT. NEPHROPEXY WITH A SINGLE MUSCLE GRAFT IN 50 PATIENTS AND WITH A DOUBLE MUSCLE GRAFT IN 18 PATIENTS ENSURED A RELIABLE FIXATION OF THE KIDNEY AND ITS PHYSIOLOGICAL MOBILITY.

UNCLASSIFIED

Acc. Nr:

AP0047634

Abstracting Service:
CHEMICAL ABST. 5/70

Ref. Code:

4R 0057

m

105091v Negative surface ionization of iodine on single-crystal bands of molybdenum and tungsten. Chaikovskij, E. F.; Mel'nik, I. G.; Pyatigorskij, G. M. (USSR). *Zh. Tekh. Fiz.* 1970, 40(1), 225-8 (Russ). The temp. dependence of the production of I^- was studied in the process of I vapor ionization on heated single-crystal strips of Mo and W used as emitters. Curves are shown for the dependences of ion current on I vapor pressure (10^{-4} - 10^{-1} torr) and on emitter temp. (2300-1400°K). These dependences of the ion current obey the Saha-Langmuir equations. At 10^{-4} torr and 1550°K, a deviation occurs which is due to a change of work function caused by I adsorption.

V. Burjan

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REEL/FRAME
19791206

18A

USSR

UDC 539.376

LIZAREV, A. D., MEL'NIK, L. N.

"Viscous-Elastic Deformation of Surface Layers Under the Influence of Normal and Tangential Forces"

Izvestiya Akademii Nauk BSSR, Seriya Fiziko-Tekhnicheskikh Nauk, 1971, No 4, pp 118-123.

ABSTRACT: A solution is presented for the problem of the displacement of points on the surface of a viscous-elastic half space with simultaneous application of normal and tangential forces. An equation for displacements is produced, expressed in exponential-fractional Rabotnov functions. Numerical results are produced using a Minsk-22 computer for time $t \rightarrow \infty$. It is demonstrated that with the initial change in t , the displacements increase intensely, after which they approach asymptotic values; the position of the points of maximum displacements relative to the points of application of concentrated forces also changes.

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USSR

UDC: 511.3.616.998(477)

MEL'NIK, M. N.

"The Morbidity of Infectious Diseases in the Ukrainian SSR, Measures to Decrease Incidence, and Plans to Eliminate Some Infections"

V sb. Materialy XV Vses. s'ezda epidemiologov, mikrobiologov i infektzionistov. Tezisy dokl. Ch. I. (Proceedings of 15th All Union Conference of Epidemiologists, Microbiologists and Specialists in Infectious Diseases, Reports of Thesis, Part I--collection works) Moscow, 1970, pp 115-116 (from RZh-Meditsinskaya geografiya, No 1, Jan 71, Abstract No 1.36.236 by V. Maslovskaya)

Translation: Immunization has played a major role in decreasing the incidence of poliomyelitis, measles, diphtheria, and whooping cough. A goal of some complexity is still the struggle against acute intestinal infections such as dysentery, which has remained at the same level for the last 10-15 years.

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Public Health, Hygiene and Sanitation

USSR

UDC 614.38:613.5

MEL'NIK, M. N., Candidate of Medical Sciences, and ZARIVAYSKAYA, Kh. A., Ministry of Health Ukrainian SSR, and Kiev Institute of General and Communal Hygiene imeni A. N. Marzeyev

"Sanitary Inspection of Private Dwellings and Public Buildings"

Moscow, Gigiyena i Sanitariya, No 12, 1970, pp 59-62

Abstract: The growth of cities and the current emphasis on efforts to reduce the incidence of noninfectious diseases are making great demands on the sanitary epidemiological stations, which are responsible, among other things, for ensuring compliance with health regulations through regular inspections, examining architectural plans, development projects, etc. The existing system has a number of shortcomings. There are no standard report forms, no specified list of buildings to be regularly inspected or indicators to be used. For example, some hospitals are judged from the amount of space allotted per bed in the wards, while others are rated by their plumbing facilities. Research institutes have issued recommendations for inspection of high-rise apartments, new heating and ventilating systems, modular constructions, etc., but to date instructions have not been prepared on methods of implementing the

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USSR

MEL'NIK, M. N., and ZARIVAYSKAYA, Kh. A., *Gigiyena i Sanitariya*, No 12, 1970, pp 59-62

recommendations. Still another weakness is the failure of health officers to make greater use of instrumental and laboratory methods of investigation, even though the necessary devices are in adequate supply.

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Acc. Nr: **AP0052080**

Ref. Code: **UR0475**

PRIMARY SOURCE: **Vrachebnoye Delo, 1970, Nr 2, pp/11-113**

SOME WAYS OF TOXOPLASMOSIS INFECTION IN ANIMALS

M. N. Melnik (Kiev)

Denying the drip and dust mechanisms of toxoplasmosis infection transmission, the author discusses the role played by the oral and fecal routes in the mechanism of toxoplasmosis transmission.

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22h.

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REEL/FRAME
19820618

Miscellaneous

USSR

UDC 669.1.003:620.4

VOSKOBOYNIKOV, V. G., PERLOV, N. I., KURBATOVA, N. O., MEL'NIK, N. A.

"Prospects for Utilization of the Thermal Energy of Nuclear Reactors at Ferrous Metallurgy Plants"

Moscow, Stal', No 11, Nov 72, pp 1052-1055.

Abstract: Based on a review of the literature and information materials, as well as the authors' own studies and technical and economic evaluation, possibilities are analyzed of direct utilization of the thermal energy of nuclear reactors at metallurgical plants. Great interest is being shown in this problem in Japan and West Germany, due to the low reserves of fossil fuel and its high price. In the USA, although nuclear power engineering has been broadly developed, the use of nuclear reactor heat in ferrous metallurgy is considered unfavorable, primarily due to the lower cost of conventional fuel. Versions of the utilization of nuclear reactor heat at metallurgical plants of various structures with blast furnaces and with direct iron reduction shops have been studied for the conditions present in the USSR. The use of the heat of nuclear reactors at metallurgical plants leads to elimination of the share of natural gas from the balance. The low cost of natural gas in the USSR raises doubts as

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USSR

VOSKOBOYNIKOV, V. G., et al., Stal', No 11, Nov 72, pp 1052-1055

to the expediency of this suggestion. An economic criterion is suggested for the effectiveness of the use of nuclear reactor heat in ferrous metallurgy (in comparison to natural gas). The question of the economic effectiveness of the use of nuclear reactors must be solved considering all its aspects on the scale of the entire economy of the nation. At the present time, the problem has not yet gone beyond the stage of scientific research and experimental work.

2/2

- 49 -

1/2 041 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--HALOARYLATION OF UNSATURATED COMPOUNDS BY AROMATIC DIAZO COMPOUNDS.
XXXIX. REACTION OF 1,ARYL,1,3,BUTADIENE WITH DIPHENYL,P,P PRIME,BIS
AUTHOR--(03)-GANDUSHCHAK, N.I., VERGIZHANSKIY, V.A., BELNIK, N.N.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(4), 785-B
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, PHYSICS
TOPIC TAGS--BUTADIENE, DIAZONIUM SALT, BENZENE DERIVATIVE, CHLORIDE,
HALOGENATION, LASER, LUMINOPIHOR, SCINTILLATOR
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1946 STEP NO--0K70356/70/006/004/0755/0738
CIRC ACCESSION NO--AP0125535
UNCLASSIFIED

2/2 041

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125535

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTIONS OF (SHOWN ON MICROFICHE). THE STRUCTURE OF I WAS VERIFIED BY TREATING I (X EQUALS H, R EQUALS H OR ME) WITH P, CLN SUB2 PRIME NEGATIVE C SUB6 H SUB4 C SUB6 H SUB4 CL, P TO OBTAIN THE CORRESPONDING II. II ARE USED IN LASER TECHNOL., AS LUMINOPHORS, OR AS SCINTILLATORS. FACILITY: CHERNOVITS. GUS. UNIV., CHERNOVITSY, USSR.

UNCLASSIFIED

USSR

UDC 621.791.754'.264

TITOV, N. YA., BEL'CHUK, G. A., and MEL'NIK, H. V., Leningrad Ship-Building Institute

"Mechanized Welding of Metals With Consumable Electrodes Along a Narrow Spacing Gap in the Gaseous Protection"

Kiev, Avtomaticheskaya Svarka, No 2, 1973, pp 5-7

Abstract: The effect of the gaseous composition ($\text{CO}_2 + \text{Ar}$) on the saturation with hydrogen of the low-alloyed weld metal was studied. For this purpose Sv-10KhGSN2Mt welding wire was used. The minimal concentration of hydrogen in the weld metal was observed in the presence of 20-30% CO_2 in the gaseous protective mixture with argon. Application of the reverse polarity welding with a jet transfer of the electrode metal decreased the amount of hydrogen in the weld metal. When the amount of oxygen in the gaseous mixture increased to 10% the concentration of hydrogen in the weld metal also increased. However, a further increase in the concentration of oxygen did not increase the amount of hydrogen in the weld metal. It is recommended that 75% Ar and 25% CO_2 be used as the protective atmosphere during the mechanized welding of metals.

1/1

- 71 -

USSR

Circuit Theory

UDC 621.372.622

BOGDANOV, G. B., KOZHARIN, I. D., MEL'NIK, O. P., TROFIMOV, V. A.

"Experimental Characteristics of Certain Types of Halfopen Multicircuit Ferrite Microwave Filters"

Moscow, Radiotekhnika i Elektronika, Vol 17, No 10, 1972, pp 2043-2046

Abstract: The electromagnetic characteristics of multicircuit halfopen filters and the temperature functions of these filters -- direct losses, resonance curves, decoupling, suppression of spurious resonances and thermal stability characteristics -- were obtained experimentally in order to check the known theoretical principles and determine the possibilities of practical application of such filters. The ferrite resonators were installed in the round holes of metal diaphragms, and a constant magnetic field was applied. The diaphragms were arranged at a variable distance from each other, and the input and output ferrite resonators were located so that an intermediate ferrite resonator could be inserted as a third circuit. Investigations in the 3 centimeter band demonstrated that with an increase in the diameter of the ferrite resonators the minimum loss region corresponding to the critical couplings is shifted towards large distances between the filters, and it becomes less expressed as a result of relatively redistribution of the mutual losses and the losses to radiation. For the ferrite filter without an intermediate resonator the

1/2

USSR

BOGDANOV, G. B., et al., Radiotekhnika i Elektronika, Vol 17, No 10, 1972, pp 2043-2046

decoupling varies within the limits of 50-52 decibels, and for a ferrite filter with an intermediate resonator, within the limits of 62-63 decibels in a broad frequency range. With orientation of the ferrite filters on the [110] axis, the thermal variations of the losses are noticeable especially in the positive temperature range. The thermal effect on the parameters and characteristics of semiopen filters can be reduced significantly if the ferrite resonators of the filters are oriented independently (in the sense of coupling) along the isotropic axis. The frequency drift obtained for two coupled ferrite resonators (67 kilohertz/degree) indicates high thermal stability of the investigated halfopen filters.

2/2

- 6 -

USSR

UDC: 621.397.12

BAKHTOV, I. S., LUBANOV, S. P., MEL'NIK, O. S.

"Is it Advisable to Convert Facsimile Equipment to Frequency Modulation?"

Moscow, Elektrosvyaz', No 8, 1971, pp 45-51

Abstract: For a number of reasons, the authors feel that amplitude modulation should be given preference over frequency modulation in wirephoto systems. After comparing the basic parameters of the two methods of modulation, i. e. interference-killing properties, channel loading, the frequency spectrum occupied and transmission speed in the given channel, it is concluded that the use of frequency modulation in transmission of line and halftone images not only fails to improve image quality, but at the same time results in a reduction of transmission speed, complicates the equipment considerably, and eliminates the capability for utilizing low saturation by information signals. The authors feel that changing the entire facsimile installation over to frequency modulation is not the only way to reduce loading of the communications channel and raise the resistance to interference. As a

1/2

USSR

BAKHTOV, I. S. et al., Elektrosvyaz', No 8, 1971, pp 45-51

basic method of signal transmission, they recommend amplitude modulation by positive signals, using frequency conversion attachments in cases where the operating conditions of the channels call for frequency modulation.

2/2

USSR

UDC 537.533.8:539.216.2

KRYN'KO, YU.N., KOVAL', I.F., MEL'NIK, P.V., NAKHODKIN, N.G., SEALDERVAN, A.I.

"Effect Of Film Structure On The Characteristics Of Secondary Electron Emission"

Vol. 17, p. 12, 1972 [sic] (from RZh:Elektronika i yeye primeneniye, No 7, July 1972, Abstract No 7A12)

Translation: The paper studies the effect of the structure of Ge and Be films, condensed at oblique and normal incidences of an atomic beam at a substrate, on the coefficient of secondary electron emission σ and the inelastic reflection η . With the aid of an electron microscope it is shown that the profile of Ge and Be films consists of needle-like crystals, the axes of which are directed to the side of the beam incidence. Such a structure effects the dependence of σ and η on the angle of incidence of the primary electron beam. The absolute values of σ and η for oblique-deposited films are smaller than for normally deposited films. The greatest difference is observed in the case when the primary electrons are incident upon the target along the direction of the needle. With an increase of the energy of the primary beam, the difference of σ and η normally and of oblique-deposited films is decreased. 4 ill. 7 ref. Author's abstract.

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USSR

UDC 691.327:539.376

MEL'NIK, R. A., Candidate of Technical Sciences, and PATSULA, A. Ya.,
Engineer

"Study of Nonlinear Creep of High-strength Concrete"

Moscow, Beton i Zhelezobeton, No 3, Mar. 1973, pp 39-40.

Abstract: The Dnepropetrovsk Institute of Construction Engineering has been studying the deformation and strength of heavy vibrated concrete and the influence of creep of this concrete on loss of prestressing and crack resistance of centrally and noncentrally compressed reinforced concrete structural elements since 1965. This article presents some of the results of studies of type 600 and 700 concrete of compositions 1:1.09:2.97 (W/C = 0.40) and 1:0.94:1.65 (W/C = 0.54).

1/1

USSR

UDC: 517.946

MEL'NIK, R. S. and DRAKHLIN, Ye. Kh.

"Approximate Construction of the Green Function for Multidimensional Regions"

Sb. nauchn. tr. Perm. politekhn. in-t (Collection of Scientific Works of the Perm Polytechnical Institute) 1970, No. 70, pp 207-212 (from RZh-Matematika, No. 3, March 71, Abstract No. 3B242)

Translation: A method is proposed for the approximate construction of the Green function of the first boundary value problem for the Laplace operator in n -dimensional ($n > 2$) regions, star-shaped with respect to the coordinate origin. The method of the work of S. I. Mel'nik is used (Izv. vyssh. uchebn. zavedeniy--Matematika, Kazan', 1967). Z. Sheftel'

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- 17 -

1/2 013 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--STABILITY OF A TRANSVERSELY ISOTROPIC SPHERICAL SHELL BONDED BY AN
ELASTIC MATRIX -U-
AUTHOR-(02)-MELNIK, R.V., PELEKH, B.L.
COUNTRY OF INFO--USSR M
SOURCE--MEKhanika POLIMEROV, VOL. 6, JAN.-FEB. 1970, P. 129-131
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--SPHERIC SHELL STRUCTURE, SHELL STRUCTURE STABILITY,
REINFORCED STEEL STRUCTURE, PLASTIC FILLER
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/1945 STEP NO--UR/0374/T0/006/000/0129/0131
CIRC ACCESSION NO--AP0108274
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--A70108274

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSIS OF THE STABILITY OF A
HOLLOW SPHERICAL SHELL WITH AN ELASTIC FILLER. GENERALIZED THEORIES OF
THE TIMOSHENKO AND AMBARTSUMIAN (1961) SHELL TYPES ARE USED. THE
RESULTS OBTAINED ARE COMPARED WITH THOSE CALCULATED IN TERMS OF THE
KIRCHHOFF AND LOVE THEORY.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--STUDY OF THE WORKING CAPACITY OF AN OPERATOR UNDER CONDITIONS OF A
PROLONGED BED REST -U-
AUTHOR-(04)-ZAVIALOV, YE.S., MELNIK, S.G., CHUGUNOV, G.YA., VORONA, A.A.

COUNTRY OF INFO--USSR

SOURCE--KOSMICHESKAIA BIOLOGIIA I MEDITSINA, VOL. 4, JAN.-FEB. 1970, P.

61-65

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HYPODYNAMIA, AIRCRAFT PERSONNEL, EXERCISE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1963

STEP NO--UR/0453/70/004/000/0061/0065

CIRC ACCESSION NO--AP0120606

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120606

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE EFFECTS OF HYPOKINESIA ON THE WORKING CAPACITY OF 6 SUBJECTS WHO PERFORMED VARIOUS MANUAL AIRCRAFT CONTROL ASSIGNMENTS DURING A 100 DAY PERIOD OF BED REST, WITH OR WITHOUT PHYSICAL EXERCISES ON A SPECIAL STAND. THE NEGATIVE EFFECTS OF HYPOKINESIA ON THE PERFORMANCE OF THE SUBJECTS ARE NOTED. ROUTINE CONTROL OPERATIONS REQUIRING INSTRUMENT DIAL SCANNING AND WELL COORDINATED PRECISION MOTIONS WERE AFFECTED THE MOST.

UNCLASSIFIED

USSR

M

UDC 517.948.3

MEL'NIK, S. I., Perm' State University imeni A. M. Gor'kiy

"One Method for Constructing the Solution of a First-Order Integral Equation"
Minsk, Differentsialnyye Uravneniya, Vol 6, No 3, Mar 70, pp 548-551

Abstract: A method is proposed for constructing the solution of a first-order integral equation which is basically different from the familiar statements of M. M. Lavrent'yev, V. K. Ivanov, L. N. Tikhonov, and other authors. Necessary and sufficient conditions are obtained for the solution of the equation

$$f(x) = \int_a^b K(x, t) u(t) dt = Au,$$

where the given function $f(x)$ and the kernel $K(x, t)$ are continuous functions and $\|f\| = 1$ in L_2 . An expression is given for the approximate solution, and an evaluation of the difference between the exact and approximate solution is given.

1/1

USSR

UDC 595.771/.772-19(470.46)

POTAPOV, A. A., VLADIMIROV, V. V., MEL'NIK, T. D., and BOGDANOVA, Ye. N.,
Institute of Medical Parasitology and Tropical Medicine named Ye. I. Mart-
sinovskiy, Ministry of Health USSR, Moscow

"The Species Composition and Diurnal Activity of Mosquitoes and Gadflies in
the Lower Volga Delta"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 42, No 1, Jan/
Feb 73, pp 5-11

Abstract: Observations carried out in the lower Volga delta (Obzhorok district
of the Astrakhan' Reservation) through Jun/Aug in 1966-67 indicated that 6
mosquito species, 12 gadfly species, and 2 gnat species breed there. The most
numerous species of mosquitoes were *Aedes vexans* and *Anopheles hyrcanus* and the
most numerous species of gadflies *Hybomitra acuminatus* and *H. peculiaris* and also
(in 1966, a year of high floods) *Chrysops relictus* and *Chr. flavipes*. The
maximum activity of mosquitoes and gnats, as far as attacks on humans were con-
cerned, was in the morning and evening hours, and the maximum activity of gad-
flies in the daytime. Among mosquitoes only *Ae. vexans* and *Ae. caspius* attacked
in the daytime in the shade - *An. hyrcanus*, *An. maculipennis*, and *Mansonia*
richiardii mosquitoes became active in the cool air after dark. Of gadflies
1/2

- 5 -